REDACTED VERSION OF THE SPECIFICATION AND CLAIMS

IN THE SPECIFICATION:

In the detailed Description of the Preferred Embodiment, amend paragraphs 2, 3, and 15 as set forth below:

A first member 46 and a second member [46] 47 are extended from a carriage 48 made of a plastic resin of the head stack assembly 33, as shown in Figs.4 and 6. The first member 46 engages with the inner crash stop 36 when the head of the head stack assembly 33 is positioned on the inner most data recording track of the hard disk 32. The second member 47 engages with the outer crash stop 35 when the front tab 44 of the head stack assembly 33 rest on the ramp element 45 and the head is positioned on a stand by position, i.e., the outer most position. The first and second members 46 and 47 has a flexibility since they are an elongated bar like member made of the plastic resin, so that the first and second members 46 and 47 operate as a damper absorbing a shock when the member 46 or 47 engages with the respective crash stop, whereby it is possible to use the inner and outer crash stops 36 and 35 made of the metal integrally made with the frame of the hard disk drive device 31. In this manner, the present invention solves the second problem described above.

As described above, the 27 mm form factor represents the outer size of the housing 39, i.e., length L of 42.80 mm ± 0.10mm, a width W of 36.40 mm ± 0.15mm and a height of 5mm (max). The hard disk 32 is supported by a shaft 40 which is rotated by a spindle motor, not shown. The head stack assembly 33 is pivotally moved around a pivot point or pivot [cartridge] carriage 42. The pivot carriage 42 includes bearing assemblies 30, as shown in Figure 10. A voice coil 41 is mounted on the head stack assembly 33. The voice coil 41 and the magnet 34 constitute a voice coil motor. A current supplied to the voice coil 41 is controlled to move the head stack assembly 33 along a radial direction indicated by an arrow "A" (Fig.3) of the hard disk 32 to position a head on a head slider assembly 43 on a data recording track on the hard disk 32 to read data from the data recording track or to write the data into the data recording track. It is noted that the head/slider assembly 43

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is shown in an enlarged shape in Figure 3. Electrical conductive wires on the flexible cable 37 connect the head and the voice coil 41 to the control unit 38.

The first datum pin 57A, the second datum pin 58A and the aperture 55 are so formed on the carriage 48 that the aperture 55, through which the pivot cartridge [4] 42 is located, is located between the first datum pin 57A and the second datum pin 58A, as shown in Figure 6. And, the line 60 passing through the centers of the first and second datum pins 57A and 58A is inclined from the center line CL1 of the head stack assembly 33 by an angle $\alpha 1$ as shown in Figure 6. In other words, the center line CL1 is defined by shifting or rotating the line 60 by the angle $\alpha 1$ in a counter clockwise direction.

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IN THE CLAIMS:

Cancel claims 1-5 and 16-27.

1. (Canceled) A head stack assembly for a data recording disk drive, comprising:
a carriage on which a coil is mounted, having a first surface and a second surface;
a first head gimbal assembly mounted on said first surface;
a second head gimbal assembly mounted on said second surface; and
wherein a datum member for positioning said first head gimbal assembly on said first surface and for positioning said second head gimbal assembly on said second surface is formed on each of said first surface and said second surface of said carriage.

2. (Canceled) A head stack assembly according to claim 1 wherein said datum member is two datum pins spaced from each other, and each of said first head gimbal assembly and said second head gimbal assembly has two apertures into which said two datum pins are inserted, respectively.

3. (Canceled) A head stack assembly according to claim 2 wherein said carriage has an aperture into which a pivot member is inserted, and said aperture is located between said two datum pins.

4. (Canceled) A head stack assembly according to claim 3 wherein a line passing through said two datum pins is inclined from a center line extending in a longitudinal direction of said head stack assembly.

5. (Canceled) A head stack assembly according to claim 4 wherein the total weight of said head stack assembly is balanced at a center of said pivot member.

6. (Allowed) A head stack assembly for a data recording disk drive, comprising:
a carriage on which a coil is mounted, having a first surface and a second surface;
a first head gimbal assembly mounted on said first surface;
a second head gimbal assembly mounted on said second surface; and

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wherein said carriage has a first aperture into which a pivot member is inserted, and a diameter of said first aperture is larger than a diameter of said pivot member, each of said first head gimbal assembly and said second head gimbal assembly has a second aperture, the center of which is aligned to the center of said first aperture, the diameter of said second aperture is larger than said diameter of said pivot member, said second aperture has a V-shaped edge for aligning said pivot member, and a portion of said carriage is extruded into said first aperture, and said portion extruded from said carriage pushes said pivot member to said V-shaped edge of said second aperture when said pivot member is inserted into said second aperture and said first aperture.

7. (Allowed) A head stack assembly according to claim 6 wherein said V-shaped edge is formed to align the center of said pivot member to a center line extending in a longitudinal direction of said head stack assembly.

8. (Allowed) A head stack assembly according to claim 7, wherein the total weight of said head stack assembly is balanced at a center of said pivot member.

9. (Allowed) A head stack assembly according to claim 8, wherein material of said carriage is plastic resin, and material of said first and second head gimbal assemblies is metal.

10. (Allowed) A head stack assembly for a data recording disk drive, comprising:

a carriage on which a coil is mounted, including a first surface and a second surface and having a first aperture into which a pivot member is inserted, wherein a diameter of said first aperture is larger than a diameter of said pivot member;

a first head gimbal assembly mounted on said first surface;

a second head gimbal assembly mounted on said second surface;

wherein two datum pins for positioning said first head gimbal assembly on said first surface and for positioning said second head gimbal assembly on said second surface are formed on each of said first surface and said second surface of said carriage;

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wherein each of said first head gimbal assembly and said second head gimbal assembly includes a suspension load beam and an arm member, said suspension load beam has a rear portion, a bending portion and a front portion supporting a read/write head, and said arm member is stacked to said rear portion; and

wherein said suspension load beam has two apertures into which said two datum pins are inserted, respectively, and said suspension load beam has a second aperture, the center of which is aligned to the center of said first aperture, the diameter of said second aperture is larger than said diameter of said pivot member, said second aperture has a V-shaped edge for aligning said pivot member, and a portion of said carriage is extruded into said first aperture, and said portion extruded from said carriage pushes said pivot member to said V-shaped edge of said second aperture when said pivot member is inserted into said second aperture and said first aperture.

11. (Allowed) A head stack assembly according to claim 10 wherein said first aperture is located between said two datum pins.

12. (Allowed) A head stack assembly according to claim 10 wherein a line passing through said two datum pins is inclined from a center line extending in a longitudinal direction of said head stack assembly.

13. (Allowed) A head stack assembly according to claim 12 wherein the total weight of said head stack assembly is balanced at a center of said pivot member.

14. (Allowed) A head stack assembly according to claim 10 wherein said V-shaped edge is formed to align the center of said pivot member to a center line extending in a longitudinal direction of said head stack assembly.

15. (Allowed) A head stack assembly according to claim 14 wherein material of said carriage is plastic resin, and material of said first and second head gimbal assemblies is metal.

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16. (Canceled) A head stack assembly for a data recording disk drive, comprising:

a carriage on which a coil is mounted, having a surface and a side wall vertical to said surface wherein a positioning pin is formed on said side wall and a positioning grooves extending from said side wall to an inside of said carriage is formed;

a head gimbal assembly mounted on said surface and supporting a read/write head;

a flexible cable having a first portion, on which connecting pads connected to said read/write head are formed, a second portion, on which connecting pads connected to said coil are formed and a third portion from which said first portion and said second portion are branched; and

wherein said first portion has an aperture and said second portion has a latch structure, said positioning pin is inserted into said aperture of said first portion and said latch structure of said second portion is inserted along said positioning grooves to position said first portion along said side wall of said carriage.

17. (Canceled) A head stack assembly according to claim 16 wherein said carriage is provided with a guide member which includes a top portion parallel to said surface of said carriage and having one end coupled to said carriage and the other end, a side portion parallel to said side wall and having one end coupled to said the other end of said top portion and the other end, and a support portion coupled between said the other end of said side portion and said carriage.

18. (Canceled) A head stack assembly according to claim 17 wherein said first portion and said second portion of said flexible cable are positioned between said wall and said side portion.

19. (Canceled) A head stack assembly according to claim 18 wherein a wire positioning pin is formed on said side portion.

20. (Canceled) A data recording apparatus, comprising:

a frame;

a data recording disk mounted on said frame;

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a head stack assembly pivoted on said frame, and having a front portion supporting a read/write head and a rear portion including a coil supporting frame;

wherein a first resilient member is extended along a first side surface of said coil supporting frame from said head stack assembly, and a second resilient member is extended along a second side surface of said coil supporting frame from said head stack assembly, and

wherein an inner crash stop member for engaging with said first resilient member and an outer crash stop member for engaging with said second crash stop member are formed on said frame.

21. (Canceled) A data recording apparatus according to claim 20 wherein material of said first and second resilient members is plastic resin.

22. (Canceled) A data recording apparatus, comprising:

a frame;

a data recording disk mounted on said frame;

a head stack assembly pivoted on said frame by a pivot member, and having a front portion supporting a read/write head and a rear portion supporting a voice coil;

a magnet mounted on said frame to apply a magnetic field to said voice coil; and

wherein a said pivot member includes a washer made of a magnetic material and a fixing means for fixing said washer and said head stack assembly on said pivot member, said washer has a tab portion extended from the peripheral of said washer and said washer is fixed to said head stack assembly by said fixing means to position said tab portion to the nearest position to said magnet when said head stack assembly is stopped its outer most stop position.

23. (Canceled) A data recording apparatus according to claim 22 wherein when said head stack assembly is stopped at said outer most position, said magnet and said tab portion generate a bias force for staying said head stack assembly at said outer most stop position.

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24. (Canceled) A data recording apparatus, comprising:

an electrically conductive frame;

a data recording disk mounted on said frame;

an electrically conductive head stack assembly pivoted on said frame by an electrically conductive pivot member and having a front portion supporting a read/write head and a rear portion supporting a voice coil, wherein said head stack assembly is electrically connected to said frame and said pivot member, and a plurality of first connecting pads connected to said read/write head are formed on an insulating layer formed on said head stack assembly;

a control circuit mounted on said frame;

a flexible cable for connecting said first connecting pads to said control circuit; and

wherein a second connecting pad electrically connected to said head stack assembly is formed on said insulating layer, and said second connecting pad is electrically connected to a reference potential of said control circuit through said flexible cable.

25. (Canceled) A data recording apparatus according to claim 24 wherein said head stack assembly includes a wiring plate which includes an electrically conductive supporting plate, an insulating layer, and said first and second connecting pads and electrically conductive wires formed on said insulating layer; said electrically conductive wires connect said first connecting pads to said read/write head and connect said second pad to said electrically conductive supporting plate.

26. (Canceled) A head stack assembly for a data recording disk drive, comprising:

a carriage mounted with a coil;

a head gimbal assembly mounted on a surface of said carriages; and

wherein a datum member for positioning said head gimbal assembly on said surface is formed on said surface.

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27. (Canceled) A head stack assembly for a data recording disk drive, comprising:

a plurality of carriages each of which has a first surface and a second surface;

a first head gimbal assembly mounted on said first surface of each of said plural carriages;

a second head gimbal assembly mounted on said second surface of each of said plural carriages; and

wherein a datum member for positioning said first head gimbal assembly on said first surface and for positioning said second head gimbal assembly on said second surface is formed on each of said first surface and said second surface of each of said plural carriages.

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